#5

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

MUNROE et al.

Group Art Unit: 1647

Application No.: 10/084,507

Examiner: R. Deberry (expected)

Filed: February 28, 2002

Attorney Dkt. No.: 108074-00023

For: AN ISOLATED HUMAN EDG-4 RECEPTOR (AS AMENDED)

SUBSTITUTE STATEMENT UNDER 37 CFR §1.821(C)

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Date: June 14, 2002

Sir:

In accordance with 37 C.F.R.1.821(C), applicants are submitting herewith the Sequence Listing for the above-identified application both in paper copy form and in computer readable form.

The name of the file on the computer readable form is 100879_1.asc. The paper copy and the computer readable form are the same.

In the event that any fees are due with respect to the filing of this paper, please charge to our Deposit Account No. 01-2300, referencing Docket No. 108074-00023.

Respectfully submitted,

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Enclosures: Paper Copy of Sequence Listing
Disk Containing Sequence Listing
100885_1.DOC

6

SEQUENCE LISTING

<110> MUNROE, Donald G.
KAMBOJ, Rajender
PETERS, Diana
KOOSHESH, Fatemeh
VYAS, Tejal B.
GUPTA, Ashwani K.

<120> IDENTIFICATION OF LYSOLIPID RECEPTORS INVOLVED IN INFLAMMATORY RESPONSE

<130> 8074-8021

<140> 09/222,995
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<150> 60/109,885
<151> 1998-11-25

<150> 60/080,610
<151> 1998-04-03

<150> 60/070,185
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Glu Tyr Leu Asn Pro Asn Lys Val Gln Glu His Tyr Asn Tyr Thr Lys
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gag acg ctg gaa acg cag gag acg acc tcc cgc cag gtg gcc tcg gcc 151
Glu Thr Leu Glu Thr Gln Glu Thr Thr Ser Arg Gln Val Ala Ser Ala
25 30 35

ttc atc gtc atc ctc tgt tgc gcc att gtg gtg gaa aac ctt ctg gtg 199
Phe Ile Val Ile Leu Cys Cys Ala Ile Val Val Glu Asn Leu Leu Val
40 45 50

ctc att gcg gtg gcc cga aac agc aag ttc cac tcg gca atg tac ctg 247
Leu Ile Ala Val Ala Arg Asn Ser Lys Phe His Ser Ala Met Tyr Leu
55 60 65 70

ttt ctg ggc aac ctg gcc gcc tcc gat cta ctg gca ggc gtg gcc ttc 295
Phe Leu Gly Asn Leu Ala Ala Ser Asp Leu Leu Ala Gly Val Ala Phe
75 80 85

gta gcc aat acc ttg ctc tct ggc tct gtc acg ctg agg ctg acg cct 343
Val Ala Asn Thr Leu Leu Ser Gly Ser Val Thr Leu Arg Leu Thr Pro
90 95 100

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gtg cag tgg ttt gcc cgg gag ggc tct gcc ttc atc acg ctc tcg gcc   391
Val Gln Trp Phe Ala Arg Glu Gly Ser Ala Phe Ile Thr Leu Ser Ala
        105                 110                 115

tct gtc ttc agc ctc ctg gcc atc gcc att gag cgc cac gtg gcc att   439
Ser Val Phe Ser Leu Leu Ala Ile Ala Ile Glu Arg His Val Ala Ile
    120                 125                 130

gcc aag gtc aag ctg tat ggc agc gac aag agc tgc cgc atg ctt ctg   487
Ala Lys Val Lys Leu Tyr Gly Ser Asp Lys Ser Cys Arg Met Leu Leu
135                 140                 145                 150

ctc atc ggg gcc tcg tgg ctc atc tcg ctg gtc ctc ggt ggc ctg ccc   535
Leu Ile Gly Ala Ser Trp Leu Ile Ser Leu Val Leu Gly Gly Leu Pro
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atc ctt ggc tgg aac tgc ctg ggc cac ctc gag gcc tgc tcc act gtc   583
Ile Leu Gly Trp Asn Cys Leu Gly His Leu Glu Ala Cys Ser Thr Val
            170                 175                 180

ctg cct ctc tac gcc aag cat tat gtg ctg tgc gtg gtg acc atc ttc   631
Leu Pro Leu Tyr Ala Lys His Tyr Val Leu Cys Val Val Thr Ile Phe
        185                 190                 195

tcc atc atc ctg ttg gcc atc gtg gcc ctg tac gtg cgc atc tac tgc   679
Ser Ile Ile Leu Leu Ala Ile Val Ala Leu Tyr Val Arg Ile Tyr Cys
    200                 205                 210

gtg gtc cgc tca agc cac gct gac atg gcc gcc ccg cag acg cta gcc   727
Val Val Arg Ser Ser His Ala Asp Met Ala Ala Pro Gln Thr Leu Ala
215                 220                 225                 230

ctg ctc aag acg gtc acc atc gtg cta ggc gtc ttt atc gtc tgc tgg   775
Leu Leu Lys Thr Val Thr Ile Val Leu Gly Val Phe Ile Val Cys Trp
                235                 240                 245

ctg ccc gcc ttc agc atc ctc ctt ctg gac tat gcc tgt ccc gtc cac   823
Leu Pro Ala Phe Ser Ile Leu Leu Leu Asp Tyr Ala Cys Pro Val His
            250                 255                 260

tcc tgc ccg atc ctc tac aaa gcc cac tac ytt ttc gcc gtc tcc acc   871
Ser Cys Pro Ile Leu Tyr Lys Ala His Tyr Xaa Phe Ala Val Ser Thr
        265                 270                 275

ctg aat tcc ctg ctc aac ccc gtc atc tac acg tgg cgc agc cgg gac   919
Leu Asn Ser Leu Leu Asn Pro Val Ile Tyr Thr Trp Arg Ser Arg Asp
    280                 285                 290

ctg cgg cgg gag gtg ctt cgg ccg ctg cag tgc tgg cgg ccg ggg gtg   967
Leu Arg Arg Glu Val Leu Arg Pro Leu Gln Cys Trp Arg Pro Gly Val
295                 300                 305                 310
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ggg gtg caa gga cgg agg cgg ggc ggg acc ccg ggc cac cac ctc ctg   1015
Gly Val Gln Gly Arg Arg Arg Gly Gly Thr Pro Gly His His Leu Leu
                315                 320                 325

cca ctc cgc agc tcc agc tcc ctg gag agg ggc atg cac atg ccc acg   1063
Pro Leu Arg Ser Ser Ser Ser Leu Glu Arg Gly Met His Met Pro Thr
            330                 335                 340

tca ccc acg ttt ctg gag ggc aac acg gtg gtc tgagggtggg ggtggaccaa 1116
Ser Pro Thr Phe Leu Glu Gly Asn Thr Val Val
        345                 350

caaccaggcc agggcatagg ggttcatgga aaggccactg ggtgacccca aata       1170


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<212> PRT
<213> Homo sapiens

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His Tyr Asn Tyr Thr Lys Glu Thr Leu Glu Thr Gln Glu Thr Thr Ser
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Arg Gln Val Ala Ser Ala Phe Ile Val Ile Leu Cys Cys Ala Ile Val
         35                  40                  45

Val Glu Asn Leu Leu Val Leu Ile Ala Val Ala Arg Asn Ser Lys Phe
     50                  55                  60

His Ser Ala Met Tyr Leu Phe Leu Gly Asn Leu Ala Ala Ser Asp Leu
 65                  70                  75                  80

Leu Ala Gly Val Ala Phe Val Ala Asn Thr Leu Leu Ser Gly Ser Val
                 85                  90                  95

Thr Leu Arg Leu Thr Pro Val Gln Trp Phe Ala Arg Glu Gly Ser Ala
            100                 105                 110

Phe Ile Thr Leu Ser Ala Ser Val Phe Ser Leu Leu Ala Ile Ala Ile
        115                 120                 125

Glu Arg His Val Ala Ile Ala Lys Val Lys Leu Tyr Gly Ser Asp Lys
    130                 135                 140

Ser Cys Arg Met Leu Leu Leu Ile Gly Ala Ser Trp Leu Ile Ser Leu
145                 150                 155                 160

Val Leu Gly Gly Leu Pro Ile Leu Gly Trp Asn Cys Leu Gly His Leu
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Glu Ala Cys Ser Thr Val Leu Pro Leu Tyr Ala Lys His Tyr Val Leu
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Cys Val Val Thr Ile Phe Ser Ile Ile Leu Leu Ala Ile Val Ala Leu
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Tyr Val Arg Ile Tyr Cys Val Val Arg Ser Ser His Ala Asp Met Ala
210 215 220

Ala Pro Gln Thr Leu Ala Leu Leu Lys Thr Val Thr Ile Val Leu Gly
225 230 235 240

Val Phe Ile Val Cys Trp Leu Pro Ala Phe Ser Ile Leu Leu Leu Asp
245 250 255

Tyr Ala Cys Pro Val His Ser Cys Pro Ile Leu Tyr Lys Ala His Tyr
260 265 270

Xaa Phe Ala Val Ser Thr Leu Asn Ser Leu Leu Asn Pro Val Ile Tyr
275 280 285

Thr Trp Arg Ser Arg Asp Leu Arg Arg Glu Val Leu Arg Pro Leu Gln
290 295 300

Cys Trp Arg Pro Gly Val Gly Val Gln Gly Arg Arg Arg Gly Gly Thr
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Pro Gly His His Leu Leu Pro Leu Arg Ser Ser Ser Ser Leu Glu Arg
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Gly Met His Met Pro Thr Ser Pro Thr Phe Leu Glu Gly Asn Thr Val
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<210> 18
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<212> DNA
<213> Homo sapiens

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<213> Rattus sp.

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Arg Lys Val Ala Ser Ala Phe Ile Ile Ile Leu Cys Cys Ala Ile Val
35 40 45

Val Glu Asn Leu Leu Val Leu Ile Ala Val Ala Arg Asn Ser Lys Phe
50 55 60

His Ser Ala Met Tyr Leu Phe Leu Gly Asn Leu Ala Ala Ser Asp Leu
65 70 75 80

Leu Ala Gly Val Ala Phe Val Ala Asn Thr Leu Leu Ser Gly Pro Val
85 90 95

Thr Leu Ser Leu Thr Pro Leu Gln Trp Phe Ala Arg Glu Gly Ser Ala
100 105 110

Phe Ile Thr Leu Ser Ala Ser Val Phe Ser Leu Leu Ala Ile Ala Ile
115 120 125

Glu Arg Gln Val Ala Ile Ala Lys Val Lys Leu Tyr Gly Ser Asp Lys
130 135 140

Ser Cys Arg Met Leu Met Leu Ile Gly Ala Ser Trp Leu Ile Ser Leu
145 150 155 160

Ile Leu Gly Gly Leu Pro Ile Leu Gly Trp Asn Cys Leu Asp His Leu
165 170 175

Glu Ala Cys Ser Thr Val Leu Pro Leu Tyr Ala Lys His Tyr Val Leu

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            180                 185                 190

Cys Val Val Thr Ile Phe Ser Val Ile Leu Leu Ala Ile Val Ala Leu
        195                 200                 205

Tyr Val Arg Ile Tyr Phe Val Val Arg Ser Ser His Ala Asp Val Ala
    210                 215                 220

Gly Pro Gln Thr Leu Ala Leu Leu Lys Thr Val Thr Ile Val Leu Gly
225                 230                 235                 240

Val Phe Ile Ile Cys Trp Leu Pro Ala Phe Ser Ile Leu Leu Leu Asp
                245                 250                 255

Ser Thr Cys Pro Val Arg Ala Cys Pro Val Leu Tyr Lys Ala His Tyr
            260                 265                 270

Phe Phe Ala Phe Ala Thr Leu Asn Ser Leu Leu Asn Pro Val Ile Tyr
        275                 280                 285

Thr Trp Arg Ser Arg Asp Leu Arg Arg Glu Val Leu Arg Pro Leu Leu
    290                 295                 300

Cys Trp Arg Gln Gly Lys Gly Ala Thr Gly Arg Arg Gly Gly Asn Pro
305                 310                 315                 320

Gly His Arg Leu Leu Pro Leu Arg Ser Ser Ser Ser Leu Glu Arg Gly
                325                 330                 335

Leu His Met Pro Thr Ser Pro Thr Phe Leu Glu Gly Asn Thr Val Val
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<210> 22
<211> 353
<212> PRT
<213> Homo sapiens

<400> 22

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His Tyr Asn Tyr Thr Lys Glu Thr Leu Glu Thr Gln Glu Thr Thr Ser
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Arg Gln Val Ala Ser Ala Phe Ile Val Ile Leu Cys Cys Ala Ile Val
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Val Glu Asn Leu Leu Val Leu Ile Ala Val Ala Arg Asn Ser Lys Phe
    50                  55                  60
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His Ser Ala Met Tyr Leu Phe Leu Gly Asn Leu Ala Ala Ser Asp Leu
 65                  70                  75                  80

Leu Ala Gly Val Ala Phe Val Ala Asn Thr Leu Leu Ser Gly Ser Val
                85                  90                  95

Thr Leu Arg Leu Thr Pro Val Gln Trp Phe Ala Arg Glu Gly Ser Ala
            100                 105                 110

Phe Ile Thr Leu Ser Ala Ser Val Phe Ser Leu Leu Ala Ile Ala Ile
        115                 120                 125

Glu Arg His Val Ala Ile Ala Lys Val Lys Leu Tyr Gly Ser Asp Lys
    130                 135                 140

Ser Cys Arg Met Leu Leu Leu Ile Gly Ala Ser Trp Leu Ile Ser Leu
145                 150                 155                 160

Val Leu Gly Gly Leu Pro Ile Leu Gly Trp Asn Cys Leu Gly His Leu
                165                 170                 175

Glu Ala Cys Ser Thr Val Leu Pro Leu Tyr Ala Lys His Tyr Val Leu
            180                 185                 190

Cys Val Val Thr Ile Phe Ser Ile Ile Leu Leu Ala Val Val Ala Leu
        195                 200                 205

Tyr Val Arg Ile Tyr Cys Val Val Arg Ser Ser His Ala Asp Met Ala
    210                 215                 220

Ala Pro Gln Thr Leu Ala Leu Leu Lys Thr Val Thr Ile Val Leu Gly
225                 230                 235                 240

Val Phe Ile Val Cys Trp Leu Pro Ala Phe Ser Ile Leu Leu Leu Asp
                245                 250                 255

Tyr Ala Cys Pro Val His Ser Cys Pro Ile Leu Tyr Lys Ala His Tyr
            260                 265                 270

Leu Phe Ala Val Ser Thr Leu Asn Ser Leu Leu Asn Pro Val Ile Tyr
        275                 280                 285

Thr Trp Arg Ser Arg Asp Leu Arg Arg Glu Val Leu Arg Pro Leu Gln
    290                 295                 300

Cys Trp Arg Pro Gly Val Gly Val Gln Gly Arg Arg Arg Gly Gly Thr
305                 310                 315                 320

Pro Gly His His Leu Leu Pro Leu Arg Ser Ser Ser Ser Leu Glu Arg
                325                 330                 335

Gly Met His Met Pro Thr Ser Pro Thr Phe Leu Glu Gly Asn Thr Val
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340 345 350

Val

<210> 23
<211> 351
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35 40 45

Thr Asn Leu Leu Val Ile Ala Ala Ile Ala Ser Asn Arg Arg Phe His
50 55 60

Gln Pro Ile Tyr Tyr Leu Leu Gly Asn Leu Ala Ala Ala Asp Leu Phe
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Ala Gly Val Ala Tyr Leu Phe Leu Met Phe His Thr Gly Pro Arg Thr
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Ala Arg Leu Ser Leu Glu Gly Trp Phe Leu Arg Gln Gly Leu Leu Asp
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Thr Ser Leu Thr Ala Ser Val Ala Thr Leu Leu Ala Ile Ala Val Glu
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Arg His Arg Ser Val Met Ala Val Gln Leu His Ser Arg Leu Pro Arg
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Gly Arg Val Val Met Leu Ile Val Gly Val Trp Val Ala Ala Leu Gly
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Leu Gly Leu Leu Pro Ala His Ser Trp His Cys Leu Cys Ala Leu Asp
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Arg Cys Ser Arg Met Ala Pro Leu Leu Ser Arg Ser Tyr Leu Ala Val
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Trp Ala Leu Ser Ser Leu Leu Val Phe Leu Leu Met Val Ala Val Tyr
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Thr Arg Ile Phe Phe Tyr Val Arg Arg Arg Val Gln Arg Met Ala Glu
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His Val Ser Cys His Pro Arg Tyr Arg Glu Thr Thr Leu Ser Leu Val
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Lys Thr Val Val Ile Ile Leu Gly Ala Phe Val Val Cys Trp Thr Pro
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Gly Gln Val Val Leu Leu Leu Asp Gly Leu Gly Cys Glu Ser Cys Asn
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Val Leu Ala Val Glu Lys Tyr Phe Leu Leu Leu Ala Glu Ala Asn Ser
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Leu Val Asn Ala Ala Val Tyr Ser Cys Arg Asp Ala Glu Met Arg Arg
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Thr Phe Arg Arg Leu Leu Cys Cys Ala Cys Leu Arg Gln Ser Thr Arg
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Glu Ser Val His Tyr Thr Ser Ser Ala Gln Gly Gly Ala Ser Thr Arg
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